REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are unpatentable or obvious under the provisions 35 U.S.C. §§ 102 and 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-8, 13-17, AND 23-30 UNDER 35 U.S.C. § 102

The Examiner rejected claims 1-8, 13-17, and 23-30 as being anticipated by the Gong et al. patent (U.S. Patent No. 7,076,801, issued July 11, 2006, hereinafter referred to as "Gong"). In response, the Applicants have amended independent claims 1 and 23, from which claims 2-8, 13-17, and 24-29 depend, as well as independent claim 30, in order to more clearly recite aspects of the invention.

In particular, the Examiner's attention is respectfully directed to the fact that Gong does not disclose or suggest <u>incrementing a counter</u> associated with a server to account for a security assault, <u>notifying a human operator</u> if a value of the counter exceeds a maximum limit, and automatically creating a new server instance with a new server configuration if the value of the counter does not exceed the maximum limit, wherein the new server configuration is selected from a table comprising a plurality of new server configurations, <u>where the new server configuration is associated in the table with the value of the counter</u>, as recited in amended independent claims 1, 23 and 30.

By contrast, Gong teaches a method in which new configurations for a network are generated based on "tolerance objectives and any cost or performance impact" (Gong, column 7, lines 33-37). Gong does <u>not</u> teach that potential new server configurations <u>pre-exist</u> (e.g., in a table), or that a new server configuration is chosen from among the pre-existing potential new server configurations <u>based on the value of a counter that tracks a number of times a server has been assaulted</u>. Moreover, Gong teaches that a new network configuration is <u>automatically generated</u> by an adaptive reconfigurer, i.e., <u>without any reporting to human administrators or operators</u> under any circumstances.

Specifically, independent claims 1, 23 and 30, as amended, recite:

1.   A method for automated adaptive reprovisioning of servers under security assault, the method comprising:

detecting a security assault or a possible security assault on a first server;

incrementing a counter associated with the first server to account for the security assault or possible security assault;

notifying a human operator if a value of said counter exceeds a maximum limit;
and

reprovisioning by automatically creating a new server instance with a new server configuration to perform at least one of the tasks performed by said first server, if said value of said counter does not exceed the maximum limit, wherein said new server configuration for said new server instance is selected from a table comprising a plurality of new server configurations, said new server configuration being associated in said table with said value of said counter. (Emphasis added)

23.   A computer-readable medium having stored thereon a plurality of instructions for automated adaptive reprovisioning of servers under security assault, said plurality of instructions including instructions which, when executed by a processor, cause said processor to perform:

detecting a security assault or a possible security assault on a first server;

incrementing a counter associated with the first server to account for the security assault or possible security assault;

notifying a human operator if a value of said counter exceeds a maximum limit;
and

reprovisioning by automatically creating a new server instance with a new server configuration to perform at least one of the tasks performed by said first server, if said value of said counter does not exceed the maximum limit, wherein said new server configuration for said new server instance is selected from a table comprising a plurality of new server configurations, said new server configuration being associated in said table with said value of said counter. (Emphasis added)

30.   A system for automated adaptive reprovisioning of servers under security assault, the system comprising:

a first server;

a counter associated with said first server, for tracking a number of times that said first server has come under security assault;

a security monitor, coupled to said first server, for detecting if said first server is a candidate for automatic reprovisioning with a new server instance having a new server configuration; and

Page 9

a table for storing a plurality of new server configurations, <u>where each of said plurality of new server configurations corresponds to a potential value of said counter</u>; and

a provisioner, coupled to said first server, for automatically reprovisioning said first server with said new server instance if said first server is such a candidate, <u>wherein said new server configuration for said new server instance is selected from the plurality of new server configurations based on a current value of said counter</u>. (Emphasis added)

Applicants' invention is directed to a method and apparatus for adaptive server reprovisioning under security assault. When an assault on a server is detected, the server may be reconfigured in accordance with one of a number of potential new configurations designed to improve the server's resistance to subsequent assaults. These potential new configurations are stored in a table. Embodiments of the invention track (via a counter) a number of times that the server has been assaulted and use this number as an index into the table of potential new configurations, where at least one of the potential new configurations will correspond, according to the table, to the number of times that the given server has been assaulted. If the number of times that the server has been assaulted exceeds a predefined maximum number, a human operator is notified instead. In this way, a new configuration for the server can be selected automatically in a manner that minimizes server downtime and human intervention.

Applicants' independent claims 1, 23 and 30, as amended, clearly recite the steps of <u>incrementing a counter</u> associated with a server to account for a security assault, <u>notifying a human operator</u> if a value of the counter exceeds a maximum limit, and automatically creating a new server instance with a new server configuration if the value of the counter does not exceed the maximum limit, wherein the new server configuration is selected from a table comprising a plurality of new server configurations, <u>where the new server configuration is associated in the table with the value of the counter</u>. As discussed above, Gong fails to teach or suggest any of these features. Accordingly, the Applicants respectfully submit that independent claims 1, 23 and 30, as amended, are not anticipated by Gong and are patentable under 35 U.S.C. §102.

Claims 2-8, 13-17, and 24-29 depend from claims 1 and 23 and recite additional features therefore. As such, and at least for the same reasons set forth with respect to independent claims 1 and 23, the Applicants respectfully submit that claims 2-8, 13-17, and 24-29 are also not anticipated by Gong and are patentable under 35 U.S.C. §102. Accordingly the Applicants respectfully request that the rejection of claims 1-8, 13-17, and 23-30 under 35 U.S.C. §102 be withdrawn.

II. REJECTION OF CLAIMS 9-12 AND 19-22 UNDER 35 U.S.C. § 103

1. Claims 9-12

The Examiner rejected claims 9-12 as being unpatentable over Gong in view of the Agha, et al. patent (U.S. Patent No. 6,044,461, issued on March 28, 2000, hereinafter referred to as "Agha"). In response, the Applicants have amended independent claim 1, from which claims 9-12 depend, as discussed above in order to more clearly recite aspects of the invention.

As discussed above, Gong fails to disclose incrementing a counter associated with a server to account for a security assault, notifying a human operator if a value of the counter exceeds a maximum limit, and automatically creating a new server instance with a new server configuration if the value of the counter does not exceed the maximum limit, wherein the new server configuration is selected from a table comprising a plurality of new server configurations, where the new server configuration is associated in the table with the value of the counter, as recited in amended independent claim 1. Agha fails to bridge this gap in the teachings of Gong. Accordingly, the Applicants respectfully submit that independent claim 1 is not made obvious by Gong in view of Agha and is patentable under 35 U.S.C. §103.

Claims 9-12 depend from claim 1 and recite additional features therefore. As such, and at least for the same reasons set forth with respect to independent claim 1, the Applicants respectfully submit that claims 9-12 are also not made obvious by Gong in view of Agha and are patentable under 35 U.S.C. §103. Accordingly the Applicants respectfully request that the rejection of claims 9-12 under 35 U.S.C. §102 be withdrawn.

Page 11

2. Claims 19-22

The Examiner rejected claims 19-22 as being unpatentable over Gong in view of the Burnett, et al. application (U.S. Patent Application Publication No. 2003/0018889, published on January 23, 2003, hereinafter referred to as "Burnett"). In response, the Applicants have cancelled claims 19-22 without prejudice. Accordingly, the Applicants respectfully submit that the rejection of claims 19-22 is moot.
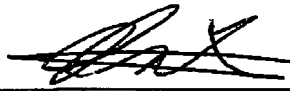
III. CONCLUSION

Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §102 and §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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Page 12